

APRIL/MAY 2025

**23UMB11 — FUNDAMENTALS OF
MICROBIOLOGY AND MICROBIAL
DIVERSITY**

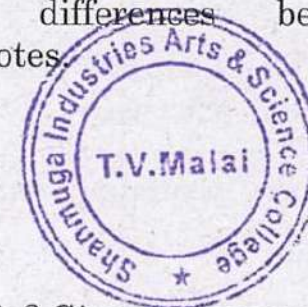
Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define ecological niche.
2. Mention any four differences between Prokaryotes and Eukaryotes.
3. What are prions?
4. What is mesosome?
5. Define pure culture.
6. What is differential media? Give one example
7. What is the principle of phase contrast microscope?
8. Define refractive index.
9. Define sterilization.
10. Differentiate antiseptic and disinfectant.



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Discuss briefly about three kingdom concept.

Or

- (b) Write briefly about archaebacteria.

12. (a) Give details about plasmamembrane and its role with neat diagram.

Or

- (b) List out general characteristic features of viruses.

13. (a) Explain serial dilution.

Or

- (b) Write short note on anaerobic culture techniques.

14. (a) Give account on fluorescent microscope.

Or

- (b) Write about classification of stains and staining methods.

15. (a) Comment on sterilization using UV radiation.

Or

- (b) Write a note on antimicrobial agents and its mode of actions.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Describe five kingdom concept.
17. Give a detailed note on bacterial cell wall with neat diagram.
18. What are types of culture media? Explain in detail with examples.
19. Write in detail about electron microscopes.
20. Discuss about heat sterilization methods.

